10/519383

MFR 126NP
2 7 DEC 2004

## **Amendments to the Claims:**

Claim 1 (original): A device for realizing an online element analysis for a substance (S) that is conveyed past or flows past a measuring station, said device comprising:

- a conveying device (51) for the substance to be measured;
- a measuring station with an X-ray source (10) and an X-ray fluorescence detector (20) having a radiation inlet,

characterized in that at least one first X-ray conductor extends from the radiation inlet of the X-ray fluorescence detector (20) in the direction of the conveying device (51).

Claim 2 (currently amended): The device according to claim 1 or 2, characterized in that at least a second X-ray conductor extends from the X-ray source (10) in the direction of the conveying device.

Claim 3 (currently amended): The device according to claim 1 or 2, characterized in that the first and/or the second X-ray conductor each consist of at least one hollow tube.

Claim 4 (original): The device according to claim 3, characterized in that the hollow tube in part is made of glass.

Claim 5 (original): The device according to claim 4, characterized in that the hollow tube is a glass capillary (30, 40).

Claim 6 (currently amended): The device according to one of the claims 3 to 5, characterized in that at least some of the hollow tubes are provided with a window (30b) at the end facing the conveying device.

Claim 7 (currently amended): The device according to one of the claims 3 to 6, characterized in that at least some of the hollow tubes are filled with hydrogen or helium.

Claim 8 (currently amended): The device according to one of the claims 3 to 7, characterized in that at least some of the hollow tubes are connected to a helium source (28) and are flushed with helium during the operation.

Claim 9 (currently amended): The device according to claim 2 or one of the claims 3 to 8, provided these refer back to claim 2, characterized in that the first and the second X-ray conductors are combined in such a way that a bundle of at least two X-ray conductors is formed at the X-ray conductor ends facing the conveying device.

Claim 10 (original): The device according to claim 7, characterized in that several first and several second X-ray conductors exist and these are combined so as to create a matrix-type structure.

Claim 11 (original): The device according to claim 8, characterized in that the axes of the X-ray conductors are parallel to each other at the end facing the conveying device.

Claim 12 (original): The device according to claim7, characterized in that at least one second X-ray conductor and several first X-ray conductors are provided, which are arranged around the second X-ray conductor, at least at the end facing the conveying device (51).

Claim 13 (currently amended): The device according to claim 7 or claim 10, characterized in that the axes of at least one second X-ray conductor and at least one first X-ray conductor jointly enclose an acute angle in the direction of the conveying device.

Claim 14 (currently amended): The device according to one of the preceding claims claim 1, characterized in that at least one thermal shield (59) is disposed between the X-ray fluorescence detector (20) and the conveying device (51).

Claim 15 (currently amended): The device according to one of the preceding claims claim 1, characterized in that it is provided with a distance sensor for measuring the height of the sample surface.

Claim 16 (original): The device according to claim 15, characterized in that the distance sensor is a laser distance sensor (60).

Claim 17 (original): The device according to claim 16, characterized in that a waveguide (61) is connected to the laser distance sensor (60) to permit a remote distance measuring.

Claim 18 (original): The device according to claim 17, characterized in that the waveguide (61) forms a bundle together with the at least one first X-ray conductor.

Claim 19 (currently amended): The device according to one of the preceding claims claim 1, characterized in that an X-ray split lens (12) for the parallel alignment of the X-rays is disposed in the beam path from the X-ray source (10).

Claim 20 (currently amended): The device according to one of the preceding claims claim 1, characterized in that a filter (42) or a monochromatic element is arranged in the beam path from the X-ray source.

Claim 21 (currently amended): The device according to one of the preceding claims claim 1, characterized in that a polarizer (44) is arranged in the beam path from the X-ray source.

Claim 22 (currently amended): The device according to one of the preceding claims claim 1, characterized in that the first X-ray conductor and the exciting radiation from the X-ray source essentially have the same angle relative to the sample surface.

Claim 23 (currently amended): The device according to claim 23 13, characterized in that the angle is a flat angle.

Claim 24 (currently amended): The device according to claim 21 and claim 23, characterized in that the flat angle corresponds to the Brewster angle for the polarized radiation.

Claim 25 (currently amended): The device according to claim 6 and claim 21, characterized in that the filter functions as a window.

Claim 26 (currently amended): The device according to one of the preceding claims claim 1, characterized in that the measuring station is arranged on a traversing and/or pivoting carriage.